

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of )  
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Telecommunications Relay Services And Speech-to-Speech ) CG Docket  
 ) 03-123  
Services for Individuals with Hearing and Speech Disabilities )  
 )  
TRS Fund Size and Payment Formula )  
  
To: Chief, Consumer and Governmental Affairs Bureau

***COMMENTS ON FURTHER NOTICE OF PROPOSED RULEMAKING***

Hands On Video Relay Services, Inc. (“Hands On”),<sup>1</sup> by its counsel, and pursuant to the Commission’s May 9, 2006 Declaratory Ruling and Further Notice of Proposed Rulemaking, FCC 06-57 (“FNPRM”) provides its comments on the FNPRM’s proposals (1) that the Commission establish a single, open and global numbering database for VRS users; and (2) that the agency mandate specific Internet protocols that VRS providers must use to receive and place VRS calls. As shown below, the Commission should establish a single, open and global numbering database, but should not at this time mandate Internet protocols VRS providers must follow.

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<sup>1</sup>Hands On is a VRS provider, through contract, to AT&T Corp. (“AT&T”). Hands On is also a certified provider of VRS for the State of Washington’s Telecommunications Relay Service (“TRS”) program. Hands On has been providing VRS since July of 2002, originally in a developmental mode, since November of 2002 under contract with AT&T, and subsequently with the State of Washington as well as with AT&T.

## *I. Introduction.*

The touchstone for decision of the issues in this proceeding must be Section 225's requirement of functional equivalence. *See* Section 225(a)(3) of the Communications Act of 1934, as amended (defining telecommunications relay service (“TRS”) as service which allows deaf and hard of hearing and speech disabled persons to communicate in a functionally equivalent manner as hearing persons). Deaf and hard of hearing persons are entitled to relay service functionally equivalent to the telephone service available to hearing persons. Functionally equivalent relay service also requires that Commission regulation not serve to limit innovation and technological advancement. This is made clear by the express wording of Section 225(d)(2) which exhorts the Commission to encourage the use of existing technology for relay services and cautions the Commission to ensure that its TRS regulations do not have the result of discouraging or impairing improved technology.

As shown below, functionally equivalent VRS service demands that deaf and hard of hearing persons be afforded a numbering scheme comparable to that enjoyed now by hearing persons. With respect to mandating protocol standards, Hands On urges a cautious approach. Hands On favors adoption of a requirement that prohibits distribution of equipment that fails to meet at least one recognized video standard. Hands On likewise has no objection to a requirement that VRS providers have the capability to provide service in any

standard video protocol. Otherwise, Hands On urges that the Commission not to mandate any particular video standard for VRS due to the risk that such a regulation would hinder future technological development. In Hands On’s view, market forces generally should be sufficient to ensure interoperability of VRS providers as long as no providers are prohibited from erecting artificial barriers designed to thwart competition. Mandating that service may only be provided in FCC approved standard protocols, however, could result in inhibiting technological development.

***II. The Commission should integrate Internet relay into the North American Numbering Plan.***

The FNPRM seeks comment on the feasibility of adoption of “a single, open and global database of proxy numbers for VRS users that would be available to all service providers, so that a hearing person can call a VRS user through any VRS provider, and without having first to ascertain the VRS user’s current IP address.” FNPRM at para. 47. There is no question as to the feasibility of such a system.<sup>2</sup> The feasibility of such a system is established because Sorenson Communications, Inc. (“Sorenson”) currently operates such a system; only Sorenson’s system is closed, not open. However, Hands On disagrees that the

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<sup>2</sup>These comments and the description of the system suggested for VRS are equally applicable to IP Relay. Accordingly, the Commission may want to and it should modify and adopt this system for both IP Relay service as well as for VRS.

system should employ “proxy” numbers. Rather the system should be fully integrated with NANP to facilitate call routing and avoid potential confusion.

Separate and closed numbering systems maintained by individual providers are antithetical to the nature of the American telephone system and the Act. The Act favors interconnection and interoperability. *See* 47 U.S.C. Section 201. *See also* Section 251, 255, 256; FCC Rule 64.704. Separate systems serve to Balkanize VRS service and it difficult for hearing persons to reach deaf persons over VRS as they would have to know not only the deaf or hard of hearing person’s “telephone number,” but also which VRS provider to go through to reach that deaf or hard of hearing person. As the FNPRM indicates, for VRS to be functionally equivalent to voice telephone service, deaf and hard of hearing persons need uniform and static end point numbers linked to NANP that will be consistent across all VRS providers. FNPRM at para. 48, citing CSD Ex Parte (October 20, 2005) at 3.

Such a system is not difficult to configure. It would be configured similar to the system for administration of toll-free numbers. *See* FCC Rule Section 52.101 et seq. VRS users desiring to facilitate receiving VRS calls would acquire a 10 digit number from one or more VRS providers. The Commission would direct the NANP administrator to establish a new NPA for VRS only use. Providers would then obtain assignment to them of NXX codes (10,000 numbers)

or portions thereof, within this VRS NPA.<sup>3</sup> Routing information for users to whom numbers are assigned would be held in a server, called the VRS Service Management System (“VRS SMS”). Whenever a user’s computer system or videophone was capable of receiving a call,<sup>4</sup> the system would contact the VRS SMS via its Internet connection to update its IP Address (“ping”). In this way the VRS SMS would be able to send routing information for the user to an

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<sup>3</sup>Nothing would prevent VRS users from receiving a number from more than one provider.

<sup>4</sup>In the case of a videophone, the device would be turned on and connected to the Internet. In the case of a computer, it would be turned on, connected to the Internet with appropriate software enabled.

inquiring VRS provider, VRS user attempting to make a deaf to deaf call,<sup>5</sup> or a telephone company attempting to complete a hearing to deaf call.

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<sup>5</sup>A positive externality of the system is that it would facilitate deaf to deaf video calls, bringing even greater telecommunications functional equivalence to deaf and hard of hearing persons.

To make the system work, the user's videophone or computer would have to be programmed to ping the VRS SMS. This would involve addition of a simple software program for personal computers which VRS providers would distribute when they assign a VRS user a VRS number.<sup>6</sup> It is a little more complicated for videophones, however, because they do not necessarily easily accept software modifications. The Commission should be aware, however, that both the Sorenson VP-100 videophone and the Dlink I2eye videophone are set up to do this now. They are programmed to ping a Sorenson server whenever they are connected to the Internet, which therefore informs the Sorenson server, *inter alia*, of their IP Addresses. It should be no problem for those devices to be

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<sup>6</sup>Preparation of this type of software would be no problem for Hands On or Sorenson which have their own engineering departments and which offer proprietary software to their VRS users. For providers lacking software design capability – who relay solely on Microsoft Net Meeting to provide VRS -- they would have to obtain suitable software from a third party vendor or not provide a PC or MacIntosh solution.

reprogrammed to ping the VRS SMS or for the Sorenson server to communicate with and update the VRS SMS server.

A potential issue, however, is that the FCC does not have direct jurisdiction over the manufacture of videophone devices. It certainly has jurisdiction, however, over manufacturers of videophone devices who offer VRS service, such as Sorenson. The FCC can and should require any such provider(s) to install appropriate software in any videophones they manufacture *or* distribute for VRS service to contact the VRS SMS. The failure to do so should disqualify any such provider from receipt of funding from the Interstate TRS Fund.<sup>7</sup> Non-affiliated videophone manufacturers, such as Motorola (maker of the Ojo) would have a market incentive to allow their devices to be programmed to provide IP Address data to the VRS SMS.<sup>8</sup>

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<sup>7</sup>Alternatively, as discussed above, in Sorenson's case the Commission could simply require Sorenson to program its Dlink and VP-100 servers to communicate the necessary information to the VRS number server.

<sup>8</sup>Widespread acceptance of the SIP protocol by VRS providers may obviate the



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need for a distinct VRS SMS as VRS numbering could be based on Electronic Numbering (“ENUM”) which creates a domain name from a telephone number resolving it to an Internet address (uniform resource identifier or URI) using DNS technology. *See generally* Appendix I, Credit Swiss/First Boston, “Can You Hear Me Now? ENUM and VoIP’s Emerging Addressing Infrastructure” (January 10, 2006).

Hearing persons could call VRS users in one of two ways: (1) by dialing the user's 10 digit VRS number directly; or (2) by dialing any VRS provider. These calls would be routed in slightly different ways. A direct dialed call would be routed by the telephone system to the (presumably) toll-free number for hearing to deaf calls of the VRS provider assigning the number to the deaf or hard of hearing person.<sup>9</sup> The VRS provider -- in receipt of the IP Address of the called party would then complete the call to the deaf or hard of hearing person. Alternatively, the calling party could place the call to any VRS provider and give the deaf or hard of hearing person's telephone number to the VRS communications assistant ("CA").<sup>10</sup> The VRS provider would then access the VRS SMS for routing information and place the call.<sup>11</sup>

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<sup>9</sup>The VRS SMS would recognize the call as coming from the PSTN and would therefore route it to the VRS provider that assigned the deaf or hard of hearing person the number in question. By contrast, however, an incoming call from another videophone would be recognized as a deaf to deaf call and would be routed directly to the IP Address of the called party's videophone or computer.

<sup>10</sup>Most likely the VRS provider would prompt the calling party at the beginning of the call to enter or say the called party's VRS number, and would then ping the VRS SMS for the called party's IP Address during the process of connecting the call to the next available CA. Alternatively, the CA would ask the calling party for the called party's telephone number, or in the absence thereof, submit an inquiry to the VRS SMS based on the called party's name and address, if the called party so consented. In this way the VRS SMS could also serve as a directory of VRS users. Thus providing the functionally equivalent of directory assistance for VRS users.

<sup>11</sup>In Hands On's view, the calling party should have the right to choose which VRS provider handles the call, and all VRS providers should generally have the necessary capability to handle any call. In other words, the calling party should have the right of equal access. Should the called party find the VRS provider unsatisfactory,

The system outlined above would also facilitate deaf to deaf calls. These would be made in a similar fashion to how Sorenson VRS users now call each other over video. Deaf users would place videophone calls to a 10 digit telephone number and would have no need to know or track potentially dynamic IP Addresses as this information would be supplied automatically by the VRS SMS and the call routed over the Internet to the called party.<sup>12</sup>

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he can so inform the calling party and the call can be re-placed using another VRS provider.

<sup>12</sup>The numbering system outlined above would not serve as a backdoor registration system or serve to identify the call as Interstate or Intrastate since knowledge of the VRS user's ID Address does not necessarily serve to identify the location of a call.

Costs of this system would be relatively minimal. An appropriate server with redundant features would be required, as well as connections to the Internet and to the PSTN LERG. Administration could be handled either by the TRS Fund Administrator, a consortium of VRS providers, the NANP administrator, or be let by competitive bid.<sup>13</sup> Costs of administration, if administered by the TRS Fund Administrator would be paid directly from the Interstate TRS Fund. If administered by a third party, the costs should be paid by VRS providers on a per number assigned basis. VRS providers would in turn include numbering costs as part of their reasonable VRS expenses under the VRS cost recovery system, making the Interstate TRS Fund ultimately responsible for the costs of administration of the system.

It is entirely appropriate that the Interstate TRS Fund bear the cost of the system. As discussed above, implementation of the numbering system is necessary to achieve functional equivalence for VRS users. Just as hearing persons can now both make and receive calls seamlessly through use of a 10 digit phone number, deaf and hard of hearing persons should likewise be able to both make and receive calls through use of a 10 digit telephone number. Since the

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<sup>13</sup>For example both NeuStar and VeriSign would seem to have a natural interest in administering such a system. *See* Appendix I.

ability to use a 10 digit phone number is necessary to functional equivalence, the costs of that system should be borne by the Interstate TRS Fund.

Participation in the system should be mandatory for all VRS providers, although Hands On believes that market forces will require all VRS providers to participate in any event. Mandatory participation is necessary in light of the common carrier nature of the service. VRS providers by regulation, hold themselves out as serving the deaf and hard of hearing public indifferently and thus should be considered common carriers.<sup>14</sup> In light of their common carrier

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<sup>14</sup>Section 3 of the Act, defines a “common carrier” as “any person engaged as a common carrier for hire, in interstate or foreign communication by wire, or radio ....” Section 225(a)(1) of the Act, which governs relay service, similarly defines a common carrier. As the court made clear in *National Ass’n of Regulatory Utility Com’rs v. FCC*, 533 F.2d 601 (D.C. Cir. 1976), the sine qua non of common carrier status is a quasi-public character which arises out of the undertaking to carry for all people indifferently. Particular services offered need not be practically available to the entire public. A specialized carrier whose services are of possible use to only a fraction of the population may nonetheless be a common carrier if it holds itself out to serve indifferently all potential users. It is not essential that there be a statutory or other legal commandment to serve indiscriminately; rather it is the practice of such indifferent service that confers “common carrier” status. *Id.* See also *Beehive Telephone, Inc. v. Bell Operating Cos.*, 78 Rad. Reg 2d (P&F) 1376 (1995) ( “key feature of common carriage under Section 3(h) of the Act is the provision of service indifferently to all potential customers. “).

VRS providers are under a common carrier obligation. This is plain from FCC Rule Section 64.604(a)(3)(i) which provides that, “Consistent with the obligations of telecommunications carrier operators, [communications assistants] are prohibited from refusing single or sequential calls or limiting the length of calls utilizing relay services. Similarly, Section 64.604(a)(3)(ii) requires TRS providers to be capable of handling any type of call normally provided by telecommunications carriers unless the Commission finds that it is not technically feasible to do so. These provisions make plain that VRS providers must, by regulation, hold themselves out to serve the deaf, hard of hearing and speech disabled public indifferently. Moreover, VRS providers are fulfilling a duty of service Section 225 imposes directly on common carriers.

If there were any doubt that relay providers are common carriers, that doubt should be put

obligation, any VRS provider should generally be able to complete a hearing to deaf call as well as a deaf to hearing call.

In sum, a single, open and global numbering system is necessary to achieve functional equivalence for VRS users. VRS users should be able to receive calls in a functionally equivalent manner from hearing persons as well as to make them. The numbering system outlined above is necessary for deaf and hard of hearing persons to receive telephone calls in a manner functionally

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to rest by review of the Commission's hearing designation order in *Publix Network Corporation*, 17 FCC Rcd 11487 (2002). There, in investigating Publix's purported TRS operation, the Common Carrier Bureau sent a letter to Publix questioning whether Publix was operating as a common carrier. Among the issues the Commission designated for hearing in that proceeding were "to determine ... whether Publix Network's authorization to operate as a common carrier should be revoked," and "to determine whether ... the Publix Companies, and/or its principals should be ordered to cease and desist from the provision of any interstate common carrier services without the prior consent of the Commission."

equivalent to that enjoyed by hearing persons. For a hearing person to receive a call, all that the caller needs is the person's telephone number. He does not need to know the company to which the called party subscribes. He does not need to know what type of telephone equipment the called party has. He does not need any other information to place the call. Deaf and hard of hearing persons deserve similar treatment. Nothing short of a single, open and global numbering system will accomplish this objective. The Commission should therefore adopt rules to implement either the system discussed above or a similar one.

*III. Commission specification of video protocols does not now appear necessary.*

HOVRS at this time opposes adoption of mandatory video protocols for VRS. It does so for the principal reason that such a measure may serve to inhibit innovation and advancement of VRS service.

This question appears to arise from the efforts of a new VRS provider, SNAP Telecommunications, which proposes to provide VRS using Session Initiated Protocol ("SIP") via the Motorola Ojo videophone device. *See* Snap Telecommunications, Inc., VRS Certification Application (January 25, 2006) at 6.

Currently, all other VRS providers use the H.323 video conferencing standard for delivery of VRS, and most commercially available videophones, Microsoft's Net Meeting, Sorenson's EnVision software and HOVRS's VideoSign software

are H.323 compatible. It is certainly a fair question to ask whether one or more VRS providers should base their service on a video protocol which is not compatible with existing VRS providers. HOVRS believes strongly that VRS services should be compatible so that users have alternative service providers available to them in the event of delays or service outages. And although this is a close question, in HOVRS's view it is a fundamentally different question than intentionally blocking VRS users from accessing competing VRS providers. HOVRS would not object to a regulation that any equipment distributed by a VRS provider must be compatible with a recognized video conferencing standard. Nevertheless, HOVRS does not believe that the Commission should specify any particular video conferencing protocol to the exclusion of others which VRS providers may use.

With all due respect, technology in general and Internet technology in particular is advancing far more rapidly than the regulatory process. Principally, that is because Internet technology has been largely bereft of regulation. Currently, it appears that VRS is a technology leader in video conferencing. Commission adoption of Internet protocols standards for video risks having the effect of putting a brake on VRS technical innovation. Providers will have no incentive either to embrace technological advancements or to innovate themselves because of the substantial cost of then convincing the



Commission to adopt new video standards. Incumbent VRS providers can be expected in turn to seek to delay adoption of new and innovative standards for competitive reasons. Deaf and hard of hearing consumers will ultimately pay the price.

HOVRS would have no objection to a requirement that VRS providers must be backward compatible, that is for example that a new VRS entrant must at a minimum be compatible with H.323. However, any such regulation must not mandate that the provider's VRS service must be provided only in H.323, only that H.323 compatible service must be available. Likewise, at a time when SIP gains wide acceptance, it would be appropriate for the Commission to require all VRS providers to offer SIP compatible service. In such a way the Commission could encourage full interoperability while not inhibiting technological advancement and innovation.

#### *IV. Conclusion.*

HOVRS urges the Commission to expeditiously adopt an open, global numbering scheme for VRS (and potentially IP Relay). HOVRS, however, urges against adoption of any mandatory video protocols for VRS which would have the effect of inhibiting introduction of technological developments.

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Respectfully submitted,

INC. HANDS ON VIDEO RELAY SERVICES,

By \_\_\_\_\_ /s/

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